



CITY OF PINOLE

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February 3, 2014

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Ms. Pamela Creedon, Executive Officer
California Regional Water Quality Control Board
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11020 Sun Center Drive, #200
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Dear Mr. Wolfe and Ms. Creedon:

Enclosed is the February 2014 Long-Term Trash Load Reduction Plan for the City of Pinole, which is required by and in accordance with Provision C.10.c in National Pollutant Discharge Elimination System (NPDES) Permit Number CAS612008 issued by the San Francisco Bay Regional Water Quality Control Board and/or by Provision C.10.c in NPDES Permit Number CA0083313 issued by the Central Valley Regional Water Quality Control Board.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Very truly yours,

Belinda B. Espinosa
City Manager for the City of Pinole

Enclosure

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City of Pinole

Trash Management Plan

2014-2022

Submitted to the
California Regional Water Quality Control Board for the San Francisco Bay Region
February 1, 2014

In compliance with Provision C.10 of the Municipal Regional Stormwater Permit

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1. Introduction by the Contra Costa Clean Water Program (CCCWP)

Contra Costa municipalities have prepared Long-Term Trash Reduction Plans (Plans) in compliance with Provision C.10.c. of the Municipal Regional Stormwater Permit¹ (MRP). Each municipal plan describes control measures and best management practices (BMPs) designed to attain a 70% trash load reduction by July 1, 2017 and a 100% reduction by July 1, 2022.

A. Trash Sources, Pathways, and Loadings

Figure 1 illustrates sources and pathways of trash that enters the region’s creeks and San Francisco Bay. Trash has multiple sources—all of which are episodic and widely dispersed.

In Figure 1, *Stormwater Conveyances* is highlighted because *only this pathway* is subject to MRP trash-reduction requirements. In reality, the other pathways are equally significant, depending on time and location. In practical terms, the pathways are intertwined. For example, on-land clean-ups reduce trash entering storm drains and also reduce wind-blown trash. When visible trash is reduced, litter and dumping from all sources tends to become less frequent and severe.

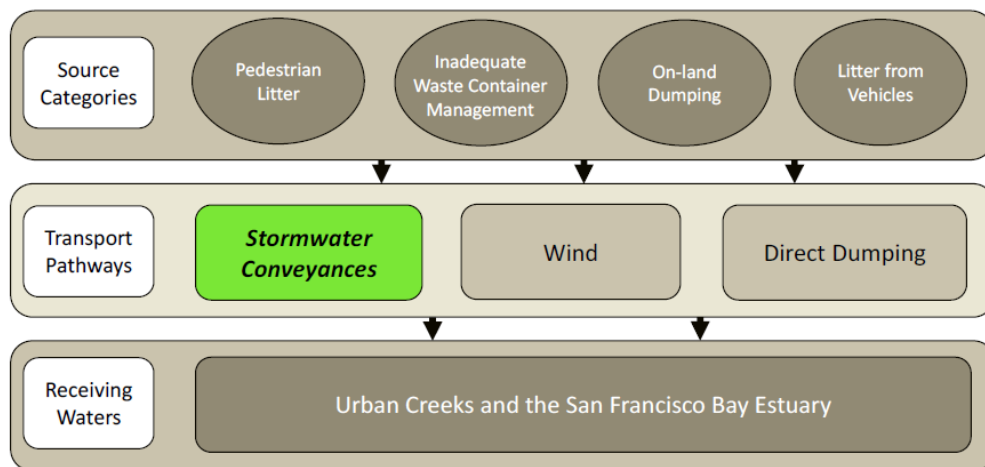


Figure 1. Trash sources and transport pathways.

Municipalities must balance their commitment to MRP compliance with their commitment to preserving and enhancing local environmental quality and quality of life for their residents. That is, municipalities seek to reduce trash on local streets and roads, and to reduce the *total* amount of trash in their creeks and on their shorelines—in addition to fulfilling the Water Board’s mandate to eliminate trash that flows through storm drains.

For these reasons, Contra Costa municipalities address trash holistically and comprehensively, integrating a variety of strategies, and uses a variety of methods to assess the success of those strategies.

B. Background for this Plan

MRP Provision C.10 requires the Permittees to reduce trash loads from their storm drains by 40% by 2014, 70% by 2017, and 100% by 2022.

Provision C.10.a.ii. required each Permittee to determine a baseline trash load and a method for tracking reductions in trash loads. Working collectively through the Bay Area Stormwater Management Agencies

¹ Order R2-2009-0074, issued by the California Regional Water Quality Control Board for the San Francisco Bay Region, became effective on December 1, 2009 and applies to 76 cities, towns, counties, and flood control districts.

Association (BASMAA)—and in close collaboration with Water Board staff—the Permittees developed methods, including a calculator, for tracking loads and load reductions.

The Permittees used these methods to develop Short-Term Trash Load Reduction Plans by February 1, 2012, and are implementing those plans through July 1, 2014 to achieve the 40% reduction. Progress has been documented in the Permittees' 2012 and 2013 Annual Reports.

Following their review of the Short-Term Plans, Water Board staff requested Permittees to change the methods used to evaluate trash load reductions. Working collectively through BASMAA—and again in close collaboration with Water Board staff—the Permittees developed the framework and planning tools to be used in the Permittees Long-Term Plans.

C. Framework for Long-Term Trash Management

The following 8-step framework was developed²:

1. Identify high, medium, and low trash generation areas, based on land use and other geographic data, local knowledge, and field verification.
2. Attempt to identify sources in high and medium trash generation areas to assist in focusing control measures.
3. Prioritize areas and problems/types.
4. Identify options (tools) for dealing with prioritized areas/problems.
5. Define success/goals and measurement type.
6. Select and implement tools.
7. Evaluate success.
8. Modify as needed.

Steps 5 and 7 of this framework acknowledge fundamental challenges presented by Provision C.10—how to define and evaluate success.

D. Identifying High-Trash Areas

To implement the first step of the framework—to identify high, medium, and low trash-generation areas—the Permittees collectively, through BASMAA, developed and calibrated a predictive model of trash generation.³ Model variables are designated land use and 2010 median household income; the model was calibrated based on trash collected in full-trash-capture devices (BASMAA, 2012a, BASMAA, 2012b).

The Permittees applied the model as follows: The model was used to generate a preliminary map designating very high, high, moderate, and low trash generation areas. Local municipal staff reviewed the preliminary map and identified areas that had incorrect designations based on local knowledge of actual land uses and of trash generation rates (CCCWP, 2013). Specific methods used to verify local trash generation rates are documented in Section 2 below and may include queries of municipal staff or members of the public, reviews of municipal operations data, viewing areas using Google Maps and Street View, application of BASMAA's On-Land Visual Trash Assessment Protocol (BASMAA, 2013), or other methods.

² The framework was developed in a November 1, 2012 meeting at Water Board staff offices and was refined in subsequent meetings with Water Board staff.

³ "Generation" is understood to be the volume of trash potentially available to be transported from the urban watershed (per acre, per year) into the storm drains in the absence of any control measures and BMPs.

E. Trash Management Strategy

Municipalities delineated Trash Management Areas (TMAs) within their jurisdictions. TMA boundaries are based on land uses, drainage areas, management areas, and/or geographic considerations, and are drawn to facilitate focused and efficient efforts to reduce trash in areas with very high, high, and medium trash generation rates. The rationale for delineating TMAs in the specific municipality, an overview of the municipality's trash management approach, and a description of activities that apply throughout the municipality (including hot spot cleanups, jurisdiction-wide policies, and jurisdiction-wide public outreach) is in Section 3.

Section 4 consists of individual summary plans for each municipal TMA. Each TMA plan describes the key TMA characteristics, summarizes control measures, and describes methods for evaluating effectiveness of efforts within the TMA.

F. Assessing Effectiveness

Each TMA summary plan includes methods to evaluate effectiveness. As indicated in the framework, the primary purpose of these evaluations is to facilitate continuous improvement of control measures within the TMA. Continuous improvement requires TMA-specific interpretation of results, including consideration of factors that may have contributed to success, or lack of success, at that locale during the evaluation period. Evaluations of effectiveness and adjustments to the TMA summary plans will be included in each annual report.

A secondary purpose of the evaluation methods is to contribute evidence toward an annual general evaluation of progress toward MRP goals. Such an evaluation will be based on weight-of-evidence, using the results from TMA-level evaluations of the effectiveness of specific actions within the TMA, and of the total of TMA-level actions, during the reporting period. A jurisdiction-wide assessment of progress will be compiled by combining this TMA-level evidence with the results of hot spot cleanups, visual assessments of creeks and shorelines, and observations by local residents and cleanup participants. As additional outcome-based assessment methods are devised and pilot tested—regionally and statewide—information derived from these methods will be incorporated into annual progress assessments.

2. City of Pinole Trash Management Overview

A. Characteristics Affecting Trash Generation and Management

Demographic data from the 2010 census is presented in Table 2-1.

Table 2-1. 2010 Census Data

Population	18,390
Under 18	20.5%
18-24	9.1%
25-44	23.5%
45-64	31.4%
65 and older	15.5%
Median household income	\$62,256

Table 2-2 presents summarizes land uses within the City of Pinole.

Table 2-2. 2005 Land Uses (ABAG)

Land Use Category	Jurisdictional Area (acres)	% of Jurisdictional Area
Commercial and Services	119.0	3.8%
Industrial	37.6	1.2%
Residential	1609.8	51.4%
Retail	171.4	5.5%
K-12 Schools	88.0	2.8%
Urban Parks	49.3%	1.6%
Other (Open Space, Agricultural and Vacant Lots)	1058.9	33.8%

During the identification of high trash areas; see Section 1-D of this plan, it was discovered that trash generation was more closely associated to land use than median household income. High trash generation areas in the City were found associated with the following land uses; Regional Commercial, Commercial Mixed Use, High Density Residential, Office Professional Mixed Use, Public/ Quasi-Public/ Institutional, Very High Density Residential, Office Industrial Mixed Use, (Source: City of Pinole General Plan Land Use Map). These land uses are commonly found along main arterials within the City.

The main sources of trash within associated land uses have been identified as being:

1. Moving vehicles,
2. General littering,
3. Overflowing or uncovered receptacles/dumpsters,
4. Convenient stores,
5. Restaurants,
6. Dispersal of trash and recyclables before, during and after collection

B. Drainage System and Water Resources Affected by Trash

Pinole's drainage system is comprised of:

- Pinole Creek and its tributaries,
- Garrity Creek,
- Duncan Creek and
- Faria Creek

Tributaries of Pinole Creek drain to into the Pinole Creek watershed and ultimately into San Pablo Bay. These tributaries pass through 5 of the 7 identified TMAs within this plan. Hot Spot assessments performed since 2010 at the selected location along Pinole Creek indicate that localized littering and wind blown trash affect this watershed that flows to San Pablo Bay. Average volumes of trash collected during assessments range from 0.8 to 1.25 cubic yards of trash. Trash collected during these assessments characterizes the majority of trash to be convenience/fast food items, bottles paper and cardboard.

C. Trash Problems and Priorities

Trash Problems

General Littering is one of the major sources of trash generation in all of Pinole's high trash areas and specifically in TMAs 1, 4, 2, 6 and 6A. General littering is a significant problem that always has been an issue from a source control perspective. Human behavioral changes are some of the toughest actions to implement with regards to planning a successful strategy for trash reduction. The City has and continues to provide outreach to the public through CCCWP countywide efforts as well as through citywide efforts to raise the public's awareness of the harmful effects of littering and trash on our environment.

Wind Blown Trash is another significant consideration for trash transportation into natural and channelized creeks within Pinole's boundaries. During the refinement process of the Trash Generation Map, staff observed locations along both natural and channelized creeks where trash was blown into to and stuck on right-of-way and boundary fencing. This indicated that trash had traveled from another generation source and had been intercepted by the fencing prior to being mobilized.

Moving Vehicles on arterial roads. Pinole's main arterial roads within TMAs are: Pinole Valley Road, San Pablo Avenue, Appian Way, Fitzgerald Drive and Tara Hills Drive. The high flows of traffic on these arterials present a trash problem as staff has observed general littering from vehicles during the Visual On-land Assessment process of this plan in these areas. Average Daily Traffic Volumes for these arterial roads are as follows:

1. Pinole Valley Rd.
2. San Pablo Ave.
3. Appian Way
4. Fitzgerald drive
5. Tara Hills Drive

CalTrans jurisdiction. Interstate-80 is a Very High Trash Generators. TMAs 1,2 and 4 are affected by trash generated along CalTrans Right-of-way and blowing into these TMAs. Coordination with CalTrans on a planning and strategy/action level is one of the actions proposed in this plan.

Trash Priorities

In May of 2013, the City began an intensive process of refining the Trash Generation Maps and creating the framework for the TMAs. During the Visual On-land Trash Assessment Protocol for Stormwater (BASMAA 2013a.) staff used; Google Earth™ street view, personal knowledge of the City and did field explorations to create a map that characterizes trash generation rates in Pinole. The framework for creation of the TMAs used assistance and input from other municipalities of similar size and demographic. The resulting work product is a map addressing Pinole's very high to low trash generation areas (see section 3 A).

The Trash Generation Map refinement process included the following steps:

- Step 1 – City staff identified areas with a potentially incorrect trash generation category.
- Step 2 – City staff performed a verification process using multiple metrics (i.e. on land visual assessment, Google Earth™, municipal staff knowledge and a review of City municipal operations data)
- Step 3 – Master Tracking Sheet Database created to track generation rate categories and trash sources found during completion of steps 1 & 2.
- Step 4 – Submittal of revised trash maps and tracking worksheet to assist in the creation of the final trash generation map that has been submitted with this report.
- Step 5 - Master Tracking Sheet Database created to identify primary and secondary TMAs and current/planned trash control measures

Table 2-3 summarizes trash generation by land use:

Table 2-3. Trash Generation Category by Land Use								
Trash Generation Category	Jurisdictional Area (Acres)	Commercial and Services	Industrial	Residential	Retail	K-12 Schools	Urban Parks	Other
Very High	0.0	0%	0%	0%	0%	0%	0%	0%
High	171.4	0%	0%	0.5%	99.5 %	0%	0%	0%
Medium	135.8	54.6%	22.5%	4.0%	0%	18.1%	0.7%	0%
Low	2826.8	1.6%	0.2%	56.7%	0%	2.2%	1.7%	0%

3. City of Pinole Trash Management Strategy

The following trash management strategy is designed to attain a 70% trash load reduction by July 1, 2017 and a 100% reduction by July 1, 2022. The strategy may be updated and revised in response to changing conditions, including the amounts and location of trash generation, effectiveness of management actions, and available resources. Updates will be documented in Annual Reports.

The City's trash management plan is an adaptive management strategy that plans to address all of the delineated TMA's by 2022. The plan addresses trash generation areas by type of land-use and generation rate first and creates the framework for using lessons learned over time through the evaluation process to have greater success in other TMAs. Strategies for trash reduction as part of this plan include but are not limited to:

1. Full capture devices. Devices have been installed in TMAs 1, 3, 6 and 6A.
2. Enhanced On-land Cleanup - As an increased effort the City will plan to enhance the on-land cleanups performed, both by staff and volunteers to achieve compliance.
3. Improved Trash Bins/Container Management. The City will plan to enhance this program by increasing the service provided to hot spot receptacles for trash collection and planning to increase the number of receptacles in pilot locations within TMAs 1, 3 and 4.

The City of Pinole has already implemented a number of actions to help the City reach the 70% reduction by July 2017 and 100% goal by July 2022. Section 4 of this plan shows actions already implemented and actions being planned to meet these goals. One of the actions already implemented are the C.3 compliant stormwater treatment facilities that capture trash. These facilities will be added to the maps and the delineations for the treatment areas shown. Additions to the maps will be included in future submissions of the Long-term Plan as well as the Annual report.

One of the goals of this plan for the City is to find effective assessments to gauge effectiveness of actions taken. Actions found to be successful will be used in phases two and three as proposed.

A. Delineation of Trash Management Areas

The Trash Management Areas created in Pinole used a hybridized approach. This approach created TMAs delineated by either; geographically connected high trash corridors along major arterial roadways or individual areas with the same land use and similar trash generation rates. The results of this approach helped to create a map that gives a an accurate characterization of the high trash areas as either being part of a high trash corridor or being isolated and unique to specific locations based on land use or type.

Staff tasked with the creation of the TMA map for the City, used personal knowledge of the City, extensive use of Google Earth™ street view and did field verification to record current conditions in a number of locations including the high trash corridors (TMAs 1-6A).

Refer to Section 2 for more on the trash generation verification process.

Table 3-1. Trash Generation Category by Trash Management Area

TMA	Jurisdictional Area (Acres)	Trash Generation Category			
		Very High	High	Medium	Low
TMA 1	122.7	0%	86.3%	7.2%	6.6%
TMA 2	29.4	0%	71.7%	28.3%	0%
TMA 3	137.5	0%	15.8%	49.0%	35.2%
TMA 4	25.5	0%	86.3%	4.0%	9.7%
TMA 5	20.2	0%	0%	100%	0%
TMA 6	30.8	0%	0%	100%	0%
TMA 7	2767.9	0%	0%	0%	100%

TMA Descriptions

TMA – 1

TMA1 has retail parcels bound by all of Fitzgerald Dr. This area has Full Trash Capture devices in Pinole Vista Crossings Shopping Center as well as the Pinole Vista Shopping Center. 1541 Fitzgerald Dr. has Stormwater Treatment Devices that provide trash capture. This is one of the major trash generation areas in the city because it is closest to interstate 80.

Land use designation: Regional Commercial, Commercial Mixed Use

Trash sources: General Littering, Moving Vehicles

TMA – 2

TMA 2 consists of retail parcels bound by Pinole Valley Road. It is surrounded by residential properties. This area has Full Trash Capture Devices installed in the storm drain inlets along Pinole Valley Road. Additionally, there are stormwater treatment devices installed at Pinole Valley Shopping Center that capture trash. This TMA's trash generation rate is influenced by wind blown trash from Interstate 80.

Land use designations: Commercial Mixed Used, High Density Residential, and Office Professional Mixed Use

TMA – 3

TMA-3 is all of San Pablo Ave. It starts at the western city limits and ends at the eastern city limits. TMA3 has retail, commercial and residential areas. This area has 22 Full Trash Capture Devices installed in the commercial section. There is a Full Trash Capture Device in the Commercial property at 812 San Pablo Ave.

Land use designations: Commercial Mixed Use, Residential Mixed Use, Public/ Quasi-Public/ Institutional, Very High Density Residential and Office Industrial Mixed Use

TMA – 4

City of Pinole Trash Management Plan 2014-2022

TMA 4 consists of retail businesses on Appian Way. These businesses are all located to the west of Interstate 80 and are influenced by wind blown trash from the Interstate. TMA 4 is surrounded by residential properties.

Land use designations: Commercial Mixed Use, Office Professional Mixed Use

TMA – 5

TMA 5 consists of all commercial and retail businesses. TMA 5 is a Medium Trash Generation Area that is surrounded by other commercial and retail businesses as well as residential properties.

Land use designations: Commercial Mixed Use, Residential Mixed Use

TMA – 6

TMA 6 consists Pinole Valley High School. Pinole Valley High School is listed as a Medium Trash Generation Area.

Land use designation: Public/ Quasi-Public/ Institutional

TMA – 6A

TMA 6A is a two-parcel TMA that includes a church and a retail property. TMA 6A is as a Medium Trash Generation Area that was delineated to separate it from TMA 6 that is non-jurisdictional (Pinole Valley High School).

Land use designation: Public/ Quasi-Public/ Institutional

TMA – 7

TMA 7 consists of all of the Low Trash Generation Areas in the City

Land use designation: Low Density Residential, Open Space and Vacant Lots.

B. Area-Specific Control Measures, Implementation Schedules, and Effectiveness Assessment

Long-Term Trash Reduction Plans for each Trash Management Area, including control measures, detailed implementation plans, and methods of assessing the effectiveness of control measures are in Section 4.

C. Creek and Shoreline Cleanups

Table 3-2. Creek and Shoreline Cleanups

Location	Description	Cleanup Frequency			
		Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Location 1	Pinole Creek		Annual	TBD	TBD
Location 2	Coastal Cleanup Day	Annual	Annual	Annual	Annual

D. Trash Reduction Policies

The City has had a long-standing policy of removing illegally dumped trash and large debris that could otherwise get into transport pathways and reach receiving waters. With regards to policies and product bans, the City of Pinole plans to be receptive to how these work in other communities that reflect needs similar to that of Pinole.

E. Public Education, Outreach, and Community Involvement

Public Outreach

Through the CCCWP, the Permittees conducted a “Litter Travels, But It Can Stop with You” multi-year campaign beginning in FY 2009-2010. The multi-media campaign was designed to educate Contra Costa’s citizens about the impacts of trash and litter in the County’s waterways and how they can help address this problem and included TV spots, billboards, posters at BART stations, placards on transit buses, print ads and updates to the CCCWP website. Other outreach included more than 10,000 letters to County residents, contact with youth sports leagues, outreach to the 17 school districts in the County, and distribution of flyers to students in 5 of those districts. Pre and post-campaign surveys were conducted.

Community Involvement

Through the CCCWP, Permittees also support the work of the California Product Stewardship Council (CPSC) and the Green Business Program. Both of these organizations address trash through source reduction and waste management. CPSC's mission is to promote Extended Producer Responsibility (EPR), which is based upon shifting California's product waste management system from one focused on government funded and ratepayer financed waste diversion to one that relies on producer responsibility in order to reduce public costs and drive improvements in product design that promote environmental sustainability. The CPSC's position is that the producers should have the primary responsibility to establish, fund, and manage end of life systems for their products. CPSC has advocated for EPR legislation affecting a wide-range of products including pharmaceuticals, batteries, paint, sharps, and mattresses.

The Green Business Program, of which CCCWP is the largest contributing Partner in Contra Costa County, is designed to publicly recognize private businesses and public agencies that take extra steps, beyond baseline compliance with environmental regulations, to prevent pollution and save resources (e.g., conserve water and energy, reduce waste through reuse and recycling, prevent stormwater pollution through good housekeeping practices, etc.). To date, 530 businesses have been certified as Green Businesses in Contra Costa County. Currently, 334 businesses are certified including a large number of auto repair shops, landscapers, waste haulers, printers, grocery and hardware stores, solar panel installers, and home remodelers. Numerous public agencies have also been certified. Municipal stormwater and POTW inspectors assist the Green Business program by encouraging potential Green Business candidates. CCCWP staff serves on the Green Business Program's "Partners Committee" and actively engages in development of the Green Business checklist (i.e., the stormwater pollution prevention section

that each business needs to complete before becoming certified as a green business). Some of the more relevant actions that businesses have undertaken to become certified or recertified that also reduce trash loads include the following: commit to reduce waste in a minimum of five ways, maintain parking areas free of litter, keep dumpsters covered when not in use, ensure tarps for covering loads are in good condition and used correctly, and purchase a minimum of three recycled-content products.

To address trash from illegal dumping, the CCCWP operates a 1-800-No-Dumping hotline. The hotline is used by both businesses and the public to report potentially illegal dumping activities. All hotline calls are referred to the appropriate municipality for follow-up and, if necessary, enforcement. Calls have been logged since FY 2004-2005. Calls to the hotline are combined with calls that come directly to municipalities and Contra Costa County Hazardous Materials (Hazmat) Division and are tracked and documented annually in the municipal annual reports.

The CCCWP will continue to identify new partners and areas of outreach for source reduction and measures to reduce trash in the environment. CCCWP is currently in contact with California Department of Transportation (Office of Stormwater Program Development) and hopes to identify trash load reduction projects in Contra Costa County that would be financially and strategically feasible for all involved parties. CCCWP has also made contact with the California Highway Patrol, Contra Costa County Solid Waste Authority, and a number of transfer stations to potentially develop additional outreach materials to reduce litter from uncovered loads.

The City coordinates and sponsors community involvement efforts targeted at trash removal in parks and neighborhoods. Community clean ups were conducted in TMAs 1 and 6A in the fiscal year 2012-13. The City is planning through this long-term plan to coordinate and sponsor activities.

F. Jurisdiction-wide Progress Assessment and Continuous Improvement

As indicated in the framework, the primary purpose of these evaluations is to facilitate continuous improvement of control measures within the TMA. Continuous improvement requires TMA-specific interpretation of results, including consideration of factors that may have contributed to success, or lack of success, at that locale during the evaluation period. Evaluations of effectiveness and adjustments to the TMA summary plans will be included in each annual report.

A secondary purpose of the evaluation methods is to contribute evidence toward an annual general evaluation of progress toward MRP goals. Such an evaluation will be based on weight-of-evidence, using the results from TMA-level evaluations of the effectiveness of specific actions within the TMA, and of the total of TMA-level actions, during the reporting period. A jurisdiction-wide assessment of progress will be compiled by combining this TMA-level evidence with the results of hot spot cleanups, visual assessments of creeks, and observations by local residents and cleanup participants. As additional outcome-based assessment methods are devised and pilot tested—regionally and statewide—information derived from these methods will be incorporated into annual progress assessments.

Specific assessment plans for trash reduction actions in the City of Pinole are the following:

Street Sweeping- The City will be creating tracking sheets for staff to use to assess general volumes of trash collected, estimated percentage of organics to trash and typical trash found with the collection of debris (plastic bags, plastic bottles, paper trash and other). The tracking sheets will be assigned to either TMAs or to an area defined by acreage. A trash generation assessment will be performed prior to and after sweeping has been completed to evaluate effectiveness. Data from the tracking sheets will be compiled and made available in Annual Reports. One area will be selected annually to perform an assessment on.

Inlet Cleaning- The City will be creating tracking sheets for staff to use when performing assessments of specific inlets. The following information will be collected: general volumes of trash collected, estimated percentage of organics to trash and typical trash found with the collection of debris (plastic bags, plastic bottles, paper trash and other). The plan is to select inlet without trash capture devices within high trash corridors to gather data in volumes of debris and percentage of trash to organics collected. When possible a photograph will be used in addition to the data sheet. One area will be selected annually to perform an assessment on.

Full Trash Capture Devices - The City plans to use data collected from areas where full trash capture devices are installed annually to record volumes and characterize trash removed into categories (plastic bags, plastic bottles, paper trash and other).

On-land Trash Cleanups -The primary method for determining the effectiveness of on-land trash cleanup strategies implemented within a trash management area will be the use of the BASMAA On-Land Visual Trash Assessment Protocol (BASMAA, 2013). This method will be used on a limited basis to verify that specific on-the-ground trash reduction strategies are effective and to measure the trash load rate subsequent to the implementation of the trash reduction strategy to determine the treatment interval needed to achieve the desired level of trash within the area. In most cases the desired level will be “no visual impact” or green on the trash load maps. But for more trash challenged TMAs, the initial goal will be to reduce the trash load to “medium” or yellow on the trash load maps. Once a TMA has reduced the trash generation load to medium, the City will explore what additional trash reduction strategies will be required to achieve “no visual impact.”

On-land trash cleanups will be assessed prior to the scheduled date. A photograph or photographs will be taken to help to characterize the volumes and types of trash to be collected. Staff and volunteers will use data sheets created by the City during the on-land cleanups to track volumes and types of trash (plastic bags, plastic bottles, paper trash and other). After the on-land cleanup is completed the area will be re-photographed to show the area is free of visual impacts of trash. The assessment will include monitoring of the area to see how long it takes for the generation rate to return to it’s previously assessed generation rate.

Improved Trash Bin/Container Management – For the areas where increased service or additional receptacles are planned within the high trash corridors of TMAs 1-7, the assessments for this measure will include documentation of service enhancements provided by the City of Pinole. For all of the areas where improved trash bin service will be proposed to the school District, the assessment strategy will have to be devised and implemented as these negotiations develop.

4. Trash Management Area Plans

A. TMA-Specific Plans

TMA-specific plans for TMAs 1 - 7 areas are attached.

5. References

BASMAA 2012a. Bay Area Stormwater Management Agencies Association. Trash Generation Rates for San Francisco Bay Area MS4s (Draft Final). Presentation to the BASMAA Trash Committee, August 2012. Prepared by EOA, Inc.

BASMAA 2012b. Baseline Trash Generation Rates, Preliminary Calibration of Modeled Results, Presentation to BASMAA Trash Committee, September, 2012. Prepared by EOA, Inc.

City of Pinole Trash Management Plan 2014-2022

BASMAA 2013a. Visual On-Land Trash Assessment Protocol for Stormwater, Version 1.0 (Draft). April 30, 2013. Prepared by EOA, Inc.

CCCWP, 2013. Contra Costa Clean Water Program. Long-Term Trash Load Reduction Plan Development—Trash Generation Map Refinements. Technical Memorandum, May 20, 2013. Prepared by EOA, Inc.

Pinole Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

1

TMA1 has commercial and retail parcels along the Fitzgerald Drive corridor. This area has Full Trash Capture devices in Pinole Vista Crossings Shopping Center as well as the Pinole Vista Shopping Center. Trash Capture and Improved Trash Bin/Container Management was incorporated into the design at 1541 Fitzgerald Drive as well. This is one of Pinole's highest trash generation areas in the city because of its proximity to Interstate 80.

Land use designation: Regional Commercial, Commercial Mixed Use

Trash sources: General Littering, Moving Cars, Convenience Stores, Restaurants, Bus Stops and CalTrans Interstate 80.

Major arterial road: Fitzgerald Drive

Key Characteristics of Trash Management Area 1

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
122.7	0%	86.3%	7.2%	6.6%	Regional Commercial, Commercial Mixed-use	Pedestrian/vehicle-generated litter

Summary of Control Measures and Implementation Schedule for Trash Management Area 1

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Trash Capture Treatment Devices	Trash capture was incorporated into the design approved for Chase Bank at 1541 Fitzgerald Drive.		X	X	X
Street Sweeping	The City has reviewed the current street sweeping schedule (weekly) for TMA 1 and has found this is adequate for this measure.	X	X	X	X
On-land Trash Cleanups	Increased On-land Cleanups are planned as a major action towards reaching the reduction levels in TMA 1.			X	X
Improved Trash Bins/Container Management	Measures implemented in Provision C.3 for new development require improved bin and container management. The City is also planning to increase trash removal at select hot spot trash receptacles to evaluate effectiveness of increased service.			X	X
Storm Drain Inlet Maintenance	Inlets within TMA 1 are inspected and maintained annually, as reported in the Annual Report.	X	X	X	X
Other	The City plans to work with co-permittees in Contra Costa to hold meeting with CalTrans representatives to address wind blown trash coming from the CalTrans Right-of-way			X	X

	into Concords TMAs.				
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The strategy for TMA 1 is to use existing services that have been reviewed by staff and found to be adequate and effective combined with new and enhanced actions. Existing services include: Street Sweeping, Inlet Maintenance and On-land Cleanups. New and enhanced actions include: Additional On-land Cleanups, Trash Capture Devices as part on the C.3 design requirement, and Improved Trash Container Management (enhanced service).

Evaluation of Program Effectiveness for Trash Management Area 1

Control Measure	Evaluation Method	Evaluation Method Details
Street Sweeping	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.
On-land Trash Cleanups	Document Cleanup Events	Track amount of trash removed. When possible, volunteer groups will be asked to track the types of trash collected using the trash collection sheet developed by the ocean conservancy for coastal cleanup day.
Improved Trash Bins/Container Management	Document Service Enhancement	The City will document the service enhancements to specific receptacles chosen. Known Hot Spots where trash generation issues have been identified may be used to do an assessment to evaluate the effects of additional receptacles or enhanced service to existing receptacles.
Enhanced Storm Drain Inlet Maintenance	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.

Pinole Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

2

TMA 2 consists of retail parcels bound by Pinole Valley Road. It is surrounded by residential properties. This area has Full Trash Capture Devices installed in the storm drain inlets along Pinole Valley Road. Additionally, there are stormwater treatment devices installed at Pinole Valley Shopping Center that capture trash. This TMA's trash generation rate is influenced by wind blown trash from Interstate 80.

Land use designations: Commercial Mixed Used, High Density Residential, and Office Professional Mixed Use

Trash sources: General Littering, Moving Cars, Convenience Stores, Restaurants, Bus Stops and CalTrans Interstate 80.

Major arterial road: Pinole Valley Road

Key Characteristics of Trash Management Area 2

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
29.4	0%	71.7%	28.3%	0%	Commercial Mixed-use	Pedestrian/vehicle-generated litter, CalTrans Right-of-way

Summary of Control Measures and Implementation Schedule for Trash Management Area 2

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Trash Capture Treatment Devices	6 REM Triton Top Hat Full Trash Capture devices have been installed along Pinole Valley Rd. Additionally; trash capture was incorporated into the design approved at the Pinole Valley Shopping Center.		X	X	X
Street Sweeping	The City has reviewed the current street sweeping schedule (weekly) for TMA 2 and has found this is adequate for this measure.	X	X	X	X
On-land Trash Cleanups	Increased On-land Cleanups are planned as a major action towards reaching the reduction levels in TMA 2. The main focus of the On-land Cleanup action will be at the High school. This will be addressed as an action in TMA 6.		X	X	X
Improved Trash Bins/Container Management	Measures implemented in Provision C.3 for new development require improved bin and container management. The City is also planning to increase trash removal at select hot spot trash receptacles to evaluate effectiveness of increased service.			X	X

Storm Drain Inlet Maintenance	Inlets within TMA 2 are inspected and maintained annually, as reported in the Annual Report.	X	X	X	X
Other	The City plans to work with co-permittees in Contra Costa to hold meeting with CalTrans representatives to address wind blown trash coming from the CalTrans Right-of-way into Concord's TMAs.			X	X

The strategy for TMA 2 is to use existing services that have been reviewed by staff and found to be adequate and effective combined with new and enhanced actions. Existing services include: Street Sweeping, Inlet Maintenance and On-land Cleanups. New and enhanced actions include: Full Trash Capture Devices installed on Pinole Valley Rd. Trash capture as part of the C.3 design requirement at the Pinole Valley Shopping Center and Improved Trash Container Management by the City.

Evaluation of Program Effectiveness for Trash Management Area 2

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture Treatment Device	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.
Street Sweeping	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.
On-land Trash Cleanups	Document Cleanup Events	Track amount of trash removed. When possible, volunteer groups will be asked to track the types of trash collected using the trash collection sheet developed by the ocean conservancy for coastal cleanup day.
Improved Trash Bins/Container Management	Document Service Enhancement	The City will document the service enhancements to specific receptacles chosen. Known Hot Spots where trash generation issues have been identified may be used to do an assessment to evaluate the effects of additional receptacles or enhanced service to existing receptacles.
Enhanced Storm Drain Inlet Maintenance	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.

Pinole Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

3

TMA-3 is all of San Pablo Ave. It starts at the western city limits and ends at the eastern city limits. TMA3 has retail, commercial and residential areas. This area has 22 Full Trash Capture Devices installed in the commercial section. There is a Full Trash Capture Device in the Commercial property at 812 San Pablo Ave.

Land use designations: Commercial Mixed Use, Residential Mixed Use, Public/Quasi-Public/ Institutional, Very High Density Residential and Office Industrial Mixed Use

Trash sources: General Littering, Moving Cars, Convenience Stores, Restaurants and Bus Stops.

Major arterial road: San Pablo Avenue

Key Characteristics of Trash Management Area 3

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
137.5	0%	15.8%	49.0%	35.2%	Commercial Mixed-use	Pedestrian/vehicle-generated litter.

Summary of Control Measures and Implementation Schedule for Trash Management Area 3

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Trash Capture Treatment Devices	22 REM Triton Top Hat Full Trash Capture devices have been installed along San Pablo Ave. Additionally, trash capture was incorporated into the design approved at the Pinole Shores development.		X	X	X
Street Sweeping	The City has reviewed the current street sweeping schedule (weekly) for TMA 3 and has found this is adequate for this measure.	X	X	X	X
Improved Trash Bins/Container Management	The City is planning to increase trash removal at select hot spot trash receptacles to evaluate effectiveness of increased service within TMA 3.			X	X
Storm Drain Inlet Maintenance	Inlets within TMA 3 are inspected and maintained annually, as reported in the Annual Report.	X	X	X	X

The strategy for TMA 3 is to use existing services that have been reviewed by staff and found to be adequate and effective combined with new and enhanced actions. Existing services include: Street Sweeping and Inlet Maintenance. New and enhanced actions include: Full Trash Capture Devices installed on San Pablo Ave. and trash capture as part of the C.3 design requirement at Pinole Shores.

Evaluation of Program Effectiveness for Trash Management Area 3

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture Treatment Device	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.
Street Sweeping	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.
Improved Trash Bins/Container Management	Document Service Enhancement	The City will document the service enhancements to specific receptacles chosen. Known Hot Spots where trash generation issues have been identified may be used to do an assessment to evaluate the effects of additional receptacles or enhanced service to existing receptacles.
Enhanced Storm Drain Inlet Maintenance	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.

TMA 4 consists of retail businesses on Appian Way. These businesses are all located to the west of Interstate 80 and are influenced by wind blown trash from the Interstate. TMA 4 is surrounded by residential properties.

Land use designations: Commercial Mixed Use, Office Professional Mixed Use

Trash sources: General Littering, Moving Cars, Retail Stores, Restaurants, Bus Stops and CalTrans Interstate 80.

Major arterial road: Appian Way

Key Characteristics of Trash Management Area 4

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
25.5	0%	86.3%	4.0%	9.7%	Commercial Mixed-use	Pedestrian/vehicle-generated litter. Interstate 80

Summary of Control Measures and Implementation Schedule for Trash Management Area 4

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Street Sweeping	The City has reviewed the current street sweeping schedule (weekly) for TMA 4 and has found this is adequate for this measure.	X	X	X	X
On-land Trash Cleanups	Increased On-land Cleanups are planned as a major action towards reaching the reduction levels in TMA 4.		X	X	X
Improved Trash Bins/Container Management	Measures implemented in Provision C.3 for new development require improved bin and container management. The City is also planning to increase trash removal at select hot spot trash receptacles to evaluate effectiveness of increased service.			X	X
Storm Drain Inlet Maintenance	Inlets within TMA 4 are inspected and maintained annually, as reported in the Annual Report.	X	X	X	X
Other	The City plans to work with co-permittees in Contra Costa to hold meeting with CalTrans representatives to address wind blown trash coming from the CalTrans Right-of-way into Pinole's TMAs.			X	X

The strategy for TMA 4 is to use existing services that have been reviewed by staff and found to be adequate and effective combined with new and enhanced actions. Existing services include: Street Sweeping, Inlet Maintenance and On-land Cleanups.

New and enhanced actions include: Improved Trash Container Management (enhanced service).

Evaluation of Program Effectiveness for Trash Management Area 4		
Control Measure	Evaluation Method	Evaluation Method Details
Street Sweeping	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.
On-land Trash Cleanups	Document Cleanup Events	Track amount of trash removed. When possible, volunteer groups will be asked to track the types of trash collected using the trash collection sheet developed by the ocean conservancy for coastal cleanup day.
Improved Trash Bins/Container Management	Document Service Enhancement	The City will document the service enhancements to specific receptacles chosen. Known Hot Spots where trash generation issues have been identified may be used to do an assessment to evaluate the effects of additional receptacles or enhanced service to existing receptacles.
Enhanced Storm Drain Inlet Maintenance	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.

TMA 5 consists of all commercial and retail businesses. TMA 5 is a Medium Trash Generation Area that is surrounded by other commercial and retail businesses as well as residential properties.

Land use designations: Commercial Mixed Use, Residential Mixed Use

Trash sources: General Littering, Moving Cars, Retail Stores, Restaurants, Bus Stops and Interstate 80.

Major arterial road: Appian Way

Key Characteristics of Trash Management Area 5

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
20.2	0%	0%	100%	0%	Commercial Mixed-use	Pedestrian/vehicle-generated litter

Summary of Control Measures and Implementation Schedule for Trash Management Area 5

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Street Sweeping	The City has reviewed the current street sweeping schedule (weekly) for TMA 5 and has found this is adequate for this measure.	X	X	X	X
On-land Trash Cleanups	Increased On-land Cleanups are planned as a major action towards reaching the reduction levels in TMA 5.			X	X
Storm Drain Inlet Maintenance	Inlets within TMA 5 are inspected and maintained annually, as reported in the Annual Report.	X	X	X	X

The strategy for TMA 5 is to use existing services that have been reviewed by staff and found to be adequate and effective combined with new and enhanced actions. Existing services include: Street Sweeping and Inlet Maintenance. Enhanced action: On-land Cleanups.

Evaluation of Program Effectiveness for Trash Management Area 5

Control Measure	Evaluation Method	Evaluation Method Details
Street Sweeping	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.
On-land Trash Cleanups	Document Cleanup Events	Track amount of trash removed. When possible, volunteer groups will be asked to track the types of trash collected using the trash collection sheet developed by the ocean

		conservancy for coastal cleanup day.
Improved Trash Bins/Container Management	Document Service Enhancement	The City will document the service enhancements to specific receptacles chosen. Known Hot Spots where trash generation issues have been identified may be used to do an assessment to evaluate the effects of additional receptacles or enhanced service to existing receptacles.
Enhanced Storm Drain Inlet Maintenance	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.

Pinole Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

6

TMA 6 consists Pinole Valley High School. Pinole Valley High School is listed as a Medium Trash Generation Area.

Land use designation: Public/ Quasi-Public/ Institutional

Trash sources: General Litter, Moving Cars, Parked Cars and Bus Stops.

Key Characteristics of Trash Management Area 6

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
30.8	0	0	100	0	Public/Quasi-Public	Pedestrian-generated litter

Summary of Control Measures and Implementation Schedule for Trash Management Area 6

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
On-land Trash Cleanups	Volunteer On-land Cleanups will be the primary trash reduction action planned for this TMA.			X	X
Full Trash Capture Devices	3 REM Triton Top Hat Full Trash Capture devices have been installed in front of Pinole Valley High School along Pinole Valley Rd.		X	X	X
Other Control Measures	In collaboration with other municipalities that have schools in the West Contra Costa Unified School District, The City of Pinole will plan to meet with the district to work together to reduce trash at the source – on campus. Motivation for the district being that the school is under the Phase II Stormwater Permit and can expect to see trash reduction provisions in coming permits.			X	X
Improved Trash Bins/Container Management	Addition receptacles and better receptacle management will be proposed to the District. The City will also plan to add enhanced service to City maintained receptacles in this TMA.			X	X

The strategy for TMA 6 will be to meet with representatives from West Contra Costa Unified School District and develop a work plan to actively involve the student body in reducing littering at the source and collecting trash on campus and it's surrounding area to reduce the halo effect of trash getting into the City's jurisdiction.

Evaluation of Program Effectiveness for Trash Management Area 6

Control Measure	Evaluation Method	Evaluation Method Details
On-land Trash Cleanups	Document Cleanup Events	Track amount of trash removed. When possible, groups will be asked to track the types of trash collected using the trash collection sheet developed by the ocean conservancy for coastal cleanup day.
Other Control Measures	Document Cleanup Events	Track amount of trash removed. When possible, groups will be asked to track the types of trash collected using the trash collection sheet developed by the ocean conservancy for coastal cleanup day.
Full Trash Capture Devices	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.
Improved Trash Bins/Container Management	Document Volumes Collected	The City will request that the District provide data from enhanced services.

Pinole Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

6A

T TMA 6A is a two-parcel TMA that includes a church and a retail property. TMA 6A is as a Medium Trash Generation Area that was delineated to separate it from TMA 6 that is non-jurisdictional (Pinole Valley High School).

Land use designation: Public/ Quasi-Public/ Institutional

Trash sources: General Litter, Moving Cars, Parked Cars and Bus Stops.

Key Characteristics of Trash Management Area 6

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
30.8	0	0	100	0	Public/Quasi-Public	Pedestrian-generated litter

Summary of Control Measures and Implementation Schedule for Trash Management Area 6

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
On-land Trash Cleanups	Volunteer On-land Cleanups will be the primary trash reduction action planned for this TMA.			X	X
Full Trash Capture Devices	2 REM Triton Top Hat Full Trash Capture devices have been installed along Pinole Valley Rd. abutting this TMA.		X	X	X
Other Control Measures	In collaboration with other municipalities that have schools in the West Contra Costa Unified School District, The City of Pinole will plan to meet with the district to work together to reduce trash at the source – on campus. Motivation for the district being that the school is under the Phase II Stormwater Permit and can expect to see trash reduction provisions in coming permits.			X	X
Enhanced Storm Drain Inlet Maintenance	Inlets in TMA 6A are inspected and maintained annually, as reported in the Annual Report.	X	X	X	X
Improved Trash Bins/Container Management	Addition receptacles and better receptacle management will be planned by the City.			X	X

The strategy for TMA 6A will be to meet with representatives from West Contra Costa Unified School District and develop a work plan to actively involve the student body in reducing littering at the source and collecting trash on campus and it's surrounding area to reduce the halo effect of trash getting into the City's jurisdiction.

Evaluation of Program Effectiveness for Trash Management Area 6

Control Measure	Evaluation Method	Evaluation Method Details
On-land Trash Cleanups	Document Cleanup Events	Track amount of trash removed. When possible, groups will be asked to track the types of trash collected using the trash collection sheet developed by the ocean conservancy for coastal cleanup day.
Other Control Measures	Document Cleanup Events	Track amount of trash removed. When possible, groups will be asked to track the types of trash collected using the trash collection sheet developed by the ocean conservancy for coastal cleanup day.
Full Trash Capture Devices	Document Maintenance	Track amount of trash removed. Volumes removed will be categorized as organic leaves and debris or trash then given a percentage of amount removed. Trash collected will be characterized as: paper, plastic bags, plastic bottles and other.
Improved Trash Bins/Container Management	Document Volumes Collected	The City will request that the District provide data from enhanced services.

Pinole Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

7

TMA 7 consists of all of the Low Trash Generation Areas in the City.

Land use designation: Low Density Residential, Open Space and Vacant Lots.

Trash sources: General Litter, Moving Cars, Overflowing Trash Receptacles and Parked Cars.

Key Characteristics of Trash Management Area 7

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
2767.9	0	0	0	100	Low Density Residential	Pedestrian-generated litter

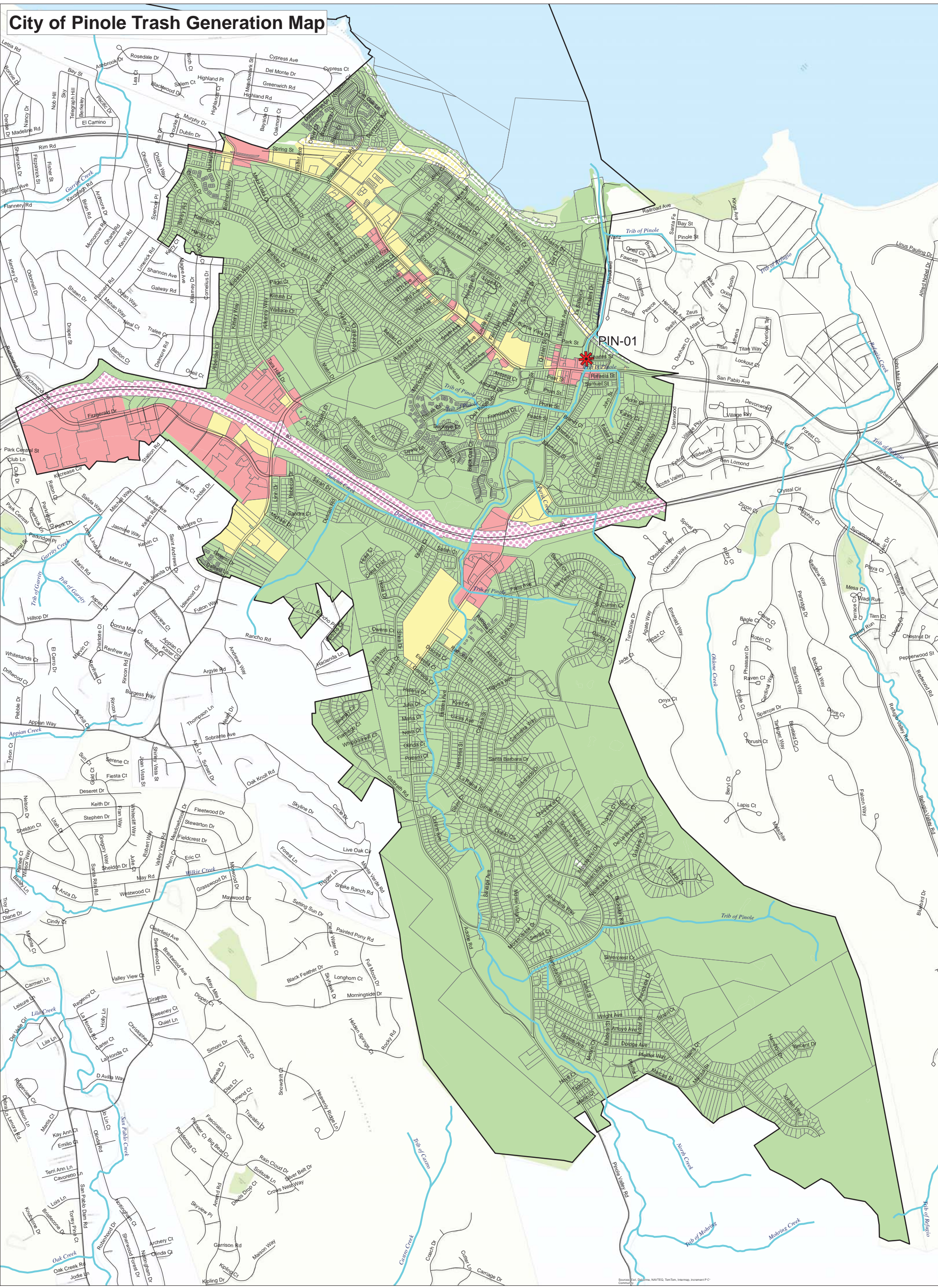
Summary of Control Measures and Implementation Schedule for Trash Management Area 7

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
On-land Trash Cleanups	Volunteer On-land Cleanups will be the primary trash reduction action planned for this TMA.	X	X	X	X
Street Seeping	The current street-sweeping schedule implemented (monthly) has been reviewed and found to be adequate for this TMA.	X	X	X	X
Improved Trash Bins/Container Management	Enhanced recycling service provided by the solid waste authority. Service has been increased to weekly from Bi-weekly for recycling.			X	X

Evaluation of Program Effectiveness for Trash Management Area 7

Control Measure	Evaluation Method	Evaluation Method Details
On-land Trash Cleanups	Document Cleanup Events	Track amount of trash removed. When possible, groups will be asked to track the types of trash collected using the trash collection sheet developed by the ocean conservancy for coastal cleanup day.
Improved Trash Bins/Container Management	Document Effects of Increased Service	The City will use data collected from neighboring jurisdictions that use the same solid waste removal service to evaluate positive reductions in trash generation from increased service.

City of Pinole Trash Generation Map



Legend

Trash Generation Category

- Low
- Medium
- High
- Very High

Creek/Shoreline Hotspot

Non-Jurisdictional (Dot color = Generation Category)

Streets

Agency Boundary

Creeks

Parcel Boundary

Data Sources:
Roads: Tele Atlas
City Boundaries: Contra Costa County
Background: ESRI World Topographic Map

Map Created By:
EOA, Inc.

Date:
December 2nd, 2013

City of Pinole Trash Generation Management Area's Map

Trash Generation

Pinole Creek

San Pablo Ave Trash Capture Device

Pinole Valley Road Trash Capture Device

Full Capture Devices

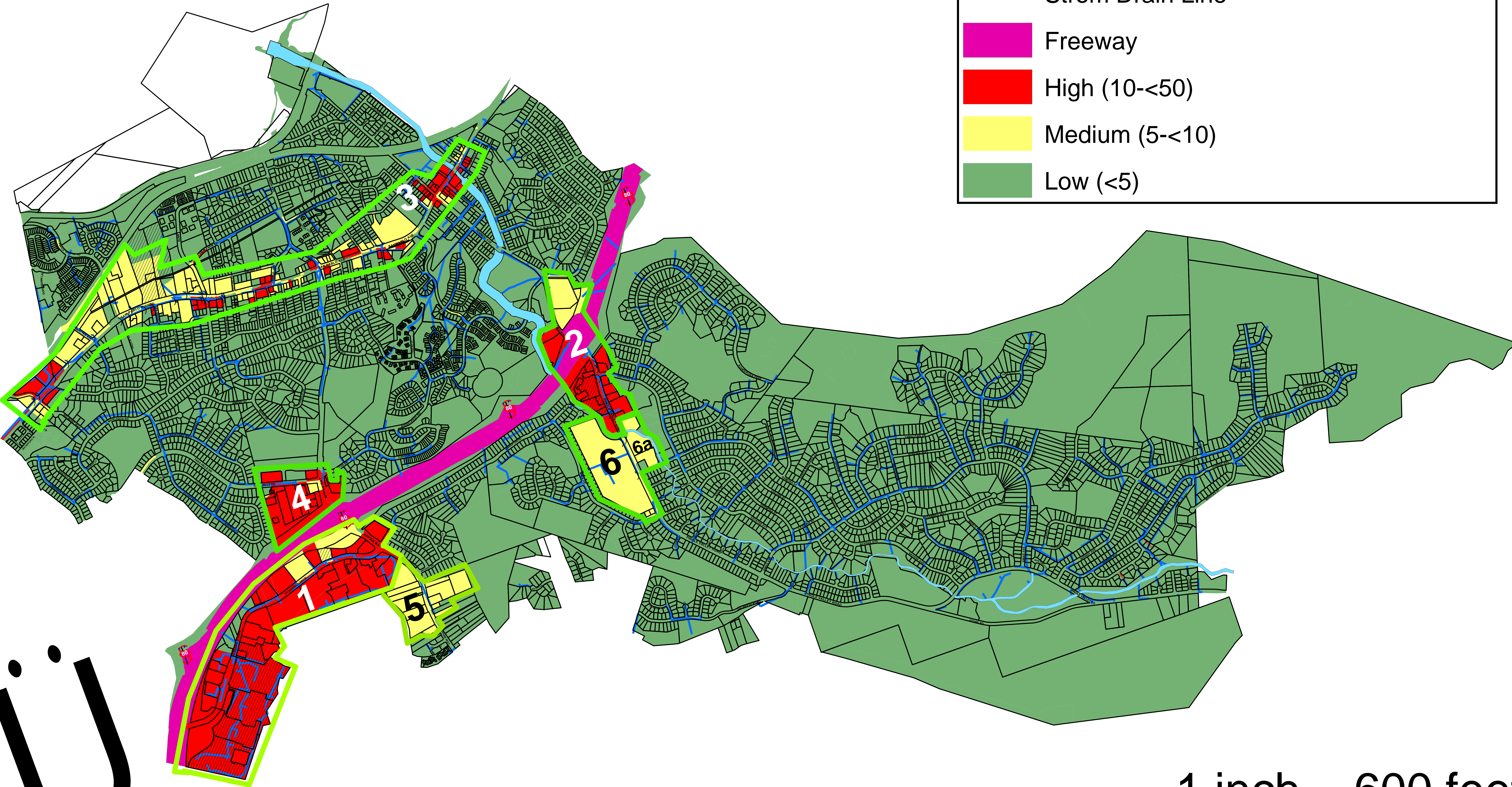
Strom Drain Line

Freeway

High (10-<50)

Medium (5-<10)

Low (<5)



1 inch = 600 feet

City of Pinole Full Trash Capture Map

Trash Generation

Pinole Creek

Pinole Valley Road Trash Capture Device 6.29 Acres

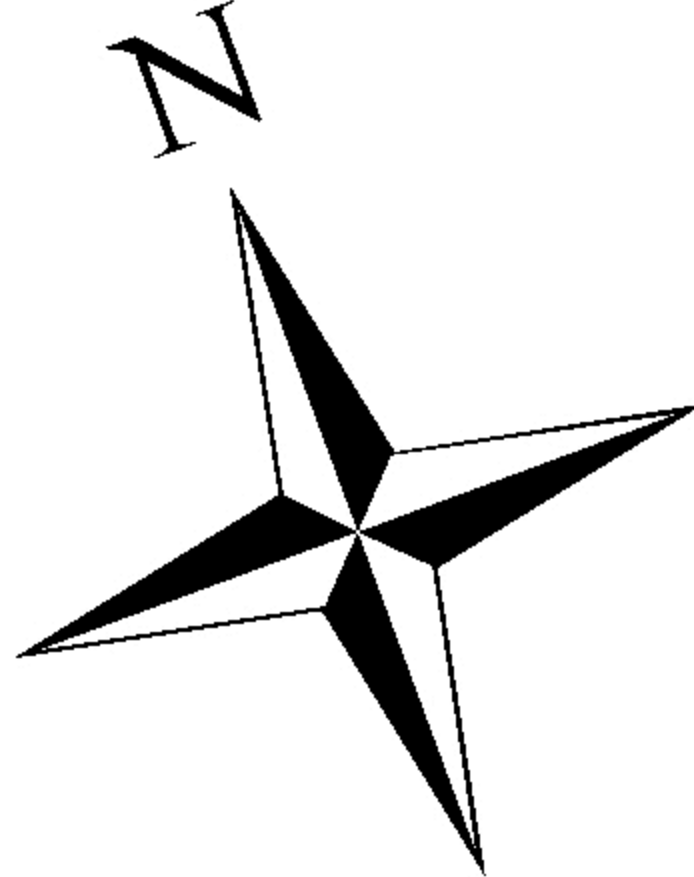
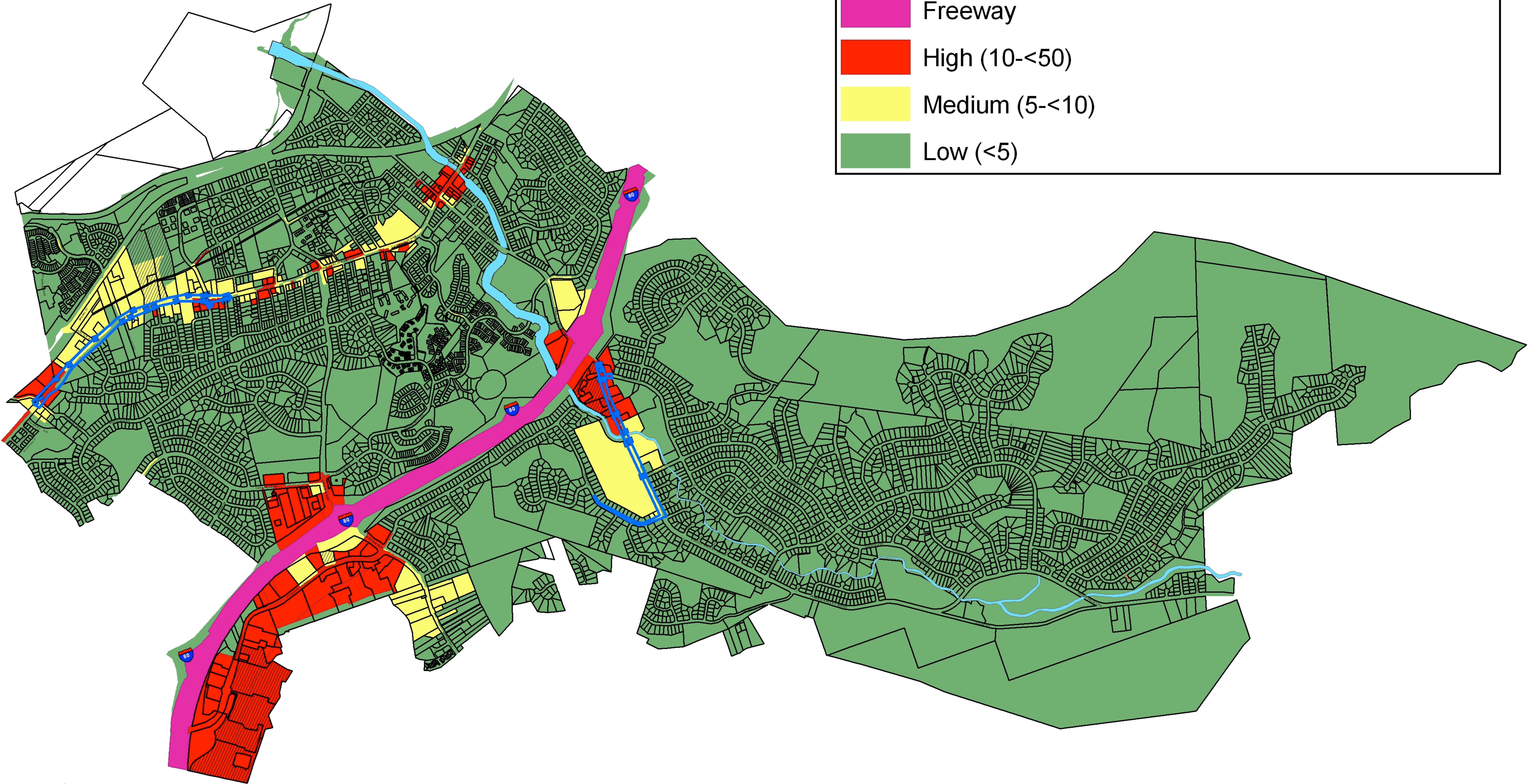
San Pablo Ave Trash Capture Device 7.96 Acres

Freeway

High (10-<50)

Medium (5-<10)

Low (<5)



1 inch = 600 feet